

Appl. No. 10/711,617
Amdt. dated May 08, 2007
Reply to Office action of February 08, 2007

REMARKS/ARGUMENTS

1. Request for Continued Examination:

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The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114. The amendments made to the claims in the above section are over the last entered amendment filed November 22, 2006.

10 2. Rejection of claims 1, 3-6 and 10-12 under 35 U.S.C 102(e) as being anticipated by Sakaki (U.S. 7,002,812).

15 Claim 1 is amended to overcome the above rejection. The amended claim 1 recites a liquid crystal display module having a glass substrate, at least gate driver chip mounted directly on the peripheral area of the glass substrate, and at least a source driver chip mounted directly on the peripheral area of the glass substrate. The thickness of the gate driver chip and the source driver chip is preferably less than 0.3 mm.

20 Claim 6 is also amended to overcome the above rejection. The amended claim 6 recites a liquid crystal display module having a glass substrate, at least a gate driver chip mounted directly on the peripheral area of the glass substrate, and at least a source driver chip mounted directly on the peripheral area of the glass substrate. Preferably, the gate driver chip and the source driver chip are bendable.

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Despite the fact that Sakaki in Fig. 11A-11B also teaches a liquid crystal display module having a glass substrate with a display area and a peripheral area, applicant asserts that the gate driver chip and the source driver chip of the cited reference are not mounted directly on the peripheral area of the glass substrate.

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Inspection of Fig. 11A-11B of the cited reference will reveal that a plurality of gate driver circuit boards 40 and a plurality of source driver circuit boards 36 are mounted on the peripheral area of the glass substrate. However, applicant asserts that these gate driver circuit boards 40 and source driver circuit boards 36 do not correspond to the gate driver chip and the source driver chip of the claimed invention. The gate driver chip and the source driver chip disclosed in the present invention preferably correspond to the integrated circuits 45 shown in Fig. 11B of the cited reference. Inspection of Fig. 11B will reveal that the integrated circuit 45 is disposed on an input FPC 38, which is further mounted on the peripheral area of the glass substrate. In other words, the integrated circuit 45 (gate or driver chip) disclosed in the cited reference is directly mounted on the input FPC 38 but not directly mounted on the glass substrate as shown in the present invention.

Specifically, the gate driver chip and the source driver chip of the present invention are mounted directly on the glass substrate with a chip-on-glass technology, in which no additional circuit board, such as an FPC is placed between the driver chip and the glass substrate.

In contrast to the claimed invention, the driver chip (such as the integrated circuits 45) disclosed by Sakaki is mounted on a glass substrate with a chip-on-film technique, in which an extra input FPC is placed between the driver chip and the glass substrate, as shown in Fig. 11B of the cited reference. Applicant thus asserts that the driver chip of the cited reference is not mounted directly on the glass substrate, as disclosed in the claimed invention.

Since the feature of the gate driver chip or the source driver chip being mounted directly on the peripheral area of a glass substrate is absent in the cited reference, applicant asserts that Sakaki does not teach the liquid crystal display module as per the limitation disclosed in amended claims 1 and 6 of the present invention.

Reconsideration of the amended claims 1 and 6 is respectfully requested. As claims

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3-5 and 10-12 are dependent upon the amended claims 1 and 6, applicant asserts that if claims 1 and 6 are found allowable, claims 3-5 and 10-12 should additionally be found allowable.

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3. Rejection of claims 8, 9 and 13-19 under 35 U.S.C 103(a) as being unpatentable over Sakaki, US Patent No. 7,002,812 in view of Sato, US 2006/0097380.

10 Claim 13 is amended to overcome the above rejection. The amended claim 13 recites a liquid crystal display module having a glass substrate and at least a driver chip mounted directly on the peripheral area of the glass substrate, in which the thickness of the driver chip is less than 0.3 mm.

15 Similar to the arguments made for claim 1, applicant asserts that the gate driver circuit board 40 and the source driver circuit board 36 disclosed in Fig. 11A-11B of Sakaki's invention do not correspond to the gate driver chip and the source driver chip of the claimed invention. The gate driver chip or the source driver chip of the present invention preferably correspond to the integrated circuit 45 shown in Fig. 11B of the cited reference, in which the integrated circuit 45 is directly disposed on an
20 input FPC 38, which is further mounted onto the peripheral area of the glass substrate.

Applicant asserts that the driver chip of the present invention is mounted directly on the glass substrate with a chip-on-glass substrate. Hence, no extra circuit board, such as an input FPC is placed between the driver chip and the glass substrate.

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The driver chip (hence the integrated circuit 45) disclosed by Sakaki however, is mounted on a glass substrate with a chip-on-film technology. Hence, an extra input FPC is placed between the integrated circuit and the glass substrate, as shown in Fig. 11B of the cited reference. Applicant thus asserts that the driver chip taught by
30 Sakaki is not mounted directly on the glass substrate as disclosed in the claimed

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invention.

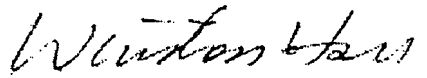
Since the feature of the driver chip being mounted directly on a glass substrate is absent in Sakaki's invention, applicant asserts that the cited reference cannot be
5 combined in the manner suggested. Reconsideration of the amended claim 13 is respectfully requested. As claims 14-19 are dependent upon claim 13, applicant asserts that if claim 13 is found allowable, claims 14-19 should additionally be found allowable. Similarly, as claims 8 and 9 are dependent upon the amended claim 6, applicant asserts that if claim 6 is found allowable, claims 8 and 9 should additionally
10 be found allowable.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Sincerely yours,



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- 10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)